# Nutrition News

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## GOOD TEACHING IMPORTANT IF CHILDREN ARE TO BENEFIT FROM KNOWLEDGE OF NUTRITION


By MARY SWARTZ ROSE, Ph.D.
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Most parents as well as teachers, having grown up before the new science of nutrition was sufficiently developed for immediate practical application in daily life, are often entirely unaware of the possibilities it offers for greater health, happiness, and efficiency for the children.

In the early primary grades, food lessons are largely for the development of attitudes which shall help the home in maintaining good food habits. Close cooperation with the home is essential to success. The teacher must know what habits and attitudes the home is establishing and direct her efforts accordingly.

Good nutrition cannot be trusted to instinct. We have evidence, in experimental work carried on through many generations of animals, similar in nutritional needs to ourselves, that a diet which is good enough to enable an adult to grow to maturity is not necessarily good enough to enable a mother to rear healthy young or for either father or mother to withstand infection and come to a vigorous and long-deferred old age. On the other hand, the persistent use of a diet rich in all the factors known to influence health and growth has resulted in better development, a longer period of active adult life, and a much delayed old age, with greater resistance of the body to those infections which make subtle inroads on health.

If we can only apply what we now know to the lives of our school children, we shall have a new generation taller and stronger than their parents. Homes do not have this knowledge. Parents had to grow up as best they could. If the present generation of children is to get benefit from it, the school must teach it.

*Doctor Rose*

The teaching of nutrition in the early primary grades is simplified by our new understanding of the protective value of certain staple foods. It helps us to know where to put the first emphasis. There is abundant evidence that a regular and liberal supply of milk is the first safeguard of child nutrition.

The teachers of little children in the mid-morning lunch at school have opportunity to create favorable attitudes to milk in all sorts of ways and to help children who for any reason develop unfavorable attitudes to overcome them. The approval of the teacher and the fact that she drinks milk, too, the attractive cup in which the milk is served, the privilege of pouring one's own glass, the sharing in a group activity, all help in creating a favorable state of mind toward something which means good growth. In teaching the child control over his environ-

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# Food MAKES THE DIFFERENCE

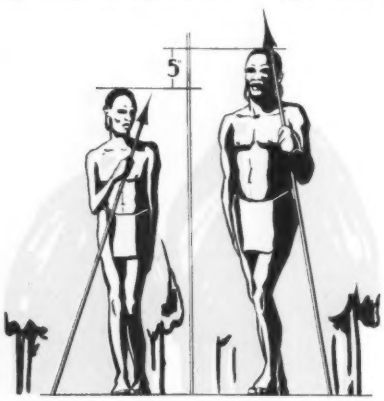
## A TRUE STORY

**Our present knowledge of nutrition gives us eyes to see the cause of many racial characteristics which were formerly thought to be due only to heredity. Studies of contrasts between racial groups are effective lessons in nutrition.**

There are many examples of races or tribes which differ from each other in physical characteristics to the same extent that their diets differ—the people receiving the best diet being the largest, strongest and healthiest.

A few years ago the influence of diet on two African tribes was studied by English scientists. These tribes were the Masai and the Kikuyu, who live near each other in regions which are geographically similar. Members of the Masai and Kikuyu tribes are not very similar, however—the Masai men being much more vigorous than the Kikuyu, and averaging about five inches taller and 23 pounds heavier than the Kikuyu. Their muscular strength is some 50% greater than that of the Kikuyu. The women average three inches more in height and 27 pounds more in weight than the Kikuyu women.

But it is the children who show the most striking contrast. When boys and girls up to eight years of age were graded on physical development, three-fourths of those in the Masai tribe were graded as "good and very good" and none as "bad," while in the Kikuyu group half of the boys and one-third of the girls were graded as "poor to very bad" and less than one-third as "good to very good." Moreover, there was a similar contrast in the number of bony deformities, dental caries, and dental defects in general. 13.7% of the Kikuyu boys and 13.1% of the Kikuyu girls had dental caries as compared with only 1.6% of the Masai boys and 3.6% of the girls. Dental defects in general were found in 40.0% of the Kikuyu boys and 28.8% of the Kikuyu girls, but in only 8.3% of the Masai boys and 7.3% of the Masai girls.




*The stalwart Masai drink the milk of their goats; the frail Kikuyu use their goats as money.*

### Diets of Tribes Differ

The diets of these two tribes differ almost as much as their physical characteristics. The Masai live mainly on milk, meat and freshly drawn blood, a diet rich in protein, fat and calcium. The Kikuyu are vegetarians; they raise goats, but use them as money, not as food, and live mostly on cereals, roots and legumes. The Kikuyu women, interestingly enough, fare better from a nutritional standpoint than the men. They are accustomed to eat considerable quantities of green leaves, and earth from salt licks (rich in sodium and calcium, and often in iron).

Not content merely to discover the differences in diet of the two tribes, the investigators made observations on growing native boys, feeding them dietary supplements of mineral mixtures with or without cod liver oil, cod liver oil alone, or milk. The boys receiving the milk supplement showed the greatest improvement, both in increased body weight and retention of calcium. These and other observations led to the conclusion that milk holds first place in value as a supplement to the diet.

## glances AT NUTRITION RESEARCH

The following reports indicate a definite trend in nutrition research toward prompt application of laboratory findings to human dietary problems.

### GROWTH AND CARIES

The higher incidence of dental caries during adolescence may be the result of the spurt in growth at this period, according to a recent study made on children at this age. During this period of life there is an unusually heavy demand for bone and tooth-building materials which should be met by an optimal diet.

### CALCIUM IMPORTANT

Observations on children and experimental animals alike show that a diet low in calcium and/or potassium causes conditions in the intestines which lead to constipation. Young rats fed diets deficient in this respect developed marked stasis and dilation in the lower intestines. Many animals had tetanic convulsions and about ten per cent of them died before the end of the experiment.

### VITAMIN D NEEDED

Weakness of skin capillaries, evidenced by easy bleeding of tissues, has been regarded as an indication of vitamin C deficiency. New studies made on a large number of school age children suggest that vitamin D is a more important factor in building capillary resistance than vitamin C. A logical source of vitamin D for children of this age is vitamin D milk if taken in sufficient quantity to satisfy the vitamin D need.

### NICOTINIC ACID

Nicotinic acid, which has been found to prevent and cure blacktongue in dogs, has recently been used with striking success in treating pellagra in human beings. The significance of this report is great, as nicotinic acid is cheap and may be put to as widespread use in the prevention and cure of pellagra as iodized salt has been in the control of goiter. Pellagra occurs chiefly in the South when the diet is lacking in milk, fresh meat and fresh vegetables.

## A SCIENTIFIC STUDY

*By Dr. Nina Simmonds*
*University of California*
*Berkeley, California*

The present state of confusion which exists with respect to the causes of dental caries may be compared with that which existed about 1920 regarding the etiology of rickets. Painstaking investigations and open-minded interpretation of data brought order out of chaos on the question of rickets. Similar methods must be applied in solving the problem of dental caries. The role of nutrition in the prevention of dental decay is one of the factors notably in need of such an approach.

Differences of opinion on the question of diet, as related to dental caries, have recently centered around the part played by sweets in dental decay. There is rather general agreement, based on informal observation as well as clinical investigation, that caries is more prevalent when the diet is high in sweets. However, one group believes that it is due to bacterial action as a result of sweet foods lodged in crevices of the teeth, the bacteria producing acids which attack the enamel. The second group takes the position that sweets are undesirable because they displace other foods which would supply the body with needed dietary essentials.

### More Research Needed

In our own work, interviews with patients have made us aware that, in part at least, the beneficial effects of a satisfactory diet may have been due to an automatic lowering of sweet foods. Recognition of this fact on the part of investigators is a great step in advance in the study of the cause of dental caries, and as a result, it appears that some of the earlier experiments on the role of nutrition in the prevention of dental caries should be re-evaluated in light of this new point of view. Likewise, other factors should be studied such as inheritance, growth, body build and adolescence.

Aside from the question of the role of nutrition there are several other unsettled points regarding the etiology of caries, such as, what role does the saliva play? What role do systemic disturbances play? What role do endocrine glands play? Time, open minds and fundamental research are probably all that are needed to demonstrate whether dental caries is primarily a local condition or whether decay is merely a manifestation of other disturbed conditions of the body.

# TIMELY Topics

**Good News**—1937 was a remarkably good health year. Infant and maternal mortality was less than ever before; death rates from heart disease and pneumonia were lower than in 1936. The birth rate was the highest since 1932.

Along with these favorable records goes a report that the average life expectancy in the United States has been increasing until we are now second only to New Zealand. The increase in expectation of life since 1900 is said to be equal to the increase in the previous 100 years.

**Nutrition Conference**—Members of the American Institute of Nutrition, national organization of leading nutritionists, reported the findings of their latest research projects at their annual meeting held in Baltimore on March 30. The importance of the protective elements in foods for good health and long life was the keynote of the Conference. Doctor Rose, author of our leading article in this issue of NUTRITION NEWS, is the retiring president of the Institute. Dr. McCollum, author of the leading article in the October number, is the newly elected president.

**May Day**—By proclamation of the President of the United States, May first of each year is designated officially as Child Health Day. The Children's Bureau of the U. S. Department of Labor sponsors May Day activities.

Each year the slogan and objective of May Day is different. The slogan for 1938 is, "Speed Children on Their Way to Health"; the objective, "To make full use, in every community, of its resources to insure children safe birth, normal growth, and protection against disease and accident."

## A PRACTICAL PLAN

*By Miss Florence Imlay*
*Extension Specialist, Foods & Nutrition*
*State of Kentucky*

The Extension Department of the University of Kentucky has cooperated for the past nine years in a most interesting and different type of school lunch project, with the Louisville Tuberculosis Association and the Jefferson County School Board of Education.

Talks or demonstrations have been given to the lunchroom directors and faculty advisors on various phases of food preparation, menu planning and nutrition. The objectives of these talks and demonstrations have been to help improve menu planning, suggest methods of serving inexpensive foods without lowering the standards of the menus; to improve the quality of foods; and to emphasize the importance of having such foods as milk, vegetables and fruits served in abundance and in attractive ways that will make the child want to eat them.

Demonstrations have been given on cooking and serving vegetables, making sandwiches, inexpensive salads and the attractive arrangement of the lunchroom counter. Talks have been given on inexpensive menus, teaching to eat new and unpopular foods and a series of definite nutritional talks on vitamins, minerals, energy-giving and muscle-building foods, digestion and constipation.

A score card was developed by which officials in the schools could judge the standard of their lunchroom. Later it was decided that to have the basis of judgment uniform one person should visit and score all the school lunchrooms in the county. The lunchrooms are scored on the basis of sanitary condition, foods, attractiveness of room, service, health practices in lunchroom, and courtesy and good manners on the part of children and lunchroom managers.

### Lunchrooms Improved

Some of the results of the project have been: more supervision of the selection of the food for the children; a larger proportion of the children drink milk at lunch time and more schools serve only best quality milk; more vegetables and fruits are served with a greater variety in the methods of preparation including salads, sandwiches and other raw foods; practically the elimination of pickles, chili and candy from the menus.

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# DID YOU KNOW ?

—that in May 1928 Congress passed a joint resolution authorizing and requesting the President to issue annually a proclamation setting apart May first as Child Health Day?

—that the Finns, whose remarkable athletic abilities are well known, consume three times as much milk per capita as the British?

—that at the recent "All-American" dinner of the Gourmet Society, an organization formed to promote the enjoyment of fine food, the dessert was ice cream? This was in recognition of the fact that ice cream is the typical and favorite American dessert.

—that Columbus, in addition to discovering America, also discovered chocolate? He brought some cocoa beans from Mexico to Queen Isabella.

—that workers in coal and iron works in North Derbyshire, England, drink milk to soothe the throat irritation caused by the dusty atmosphere? More and better work also results.

—that the new method of spray drying milk produces tiny dried bubbles which are light and hollow inside? Greater solubility is said to be one of the benefits.

—that butter was one of Napoleon's favorite foods? He insisted that all his meals be cooked in butter.

—that ripe cheese added to foodstuffs containing oils will prevent the foods from becoming rancid? A process based on this fact has recently been patented.

—that in England, an extra half-pint of fresh milk is given daily to Army recruits who have not quite obtained the necessary physical standard?

# THINGS YOU'LL LIKE TO READ

**THE FOUNDATIONS OF NUTRITION** (3rd edition)—by Mary Swartz Rose. New York: The Macmillan Company, 1938. Pp. 625. Price $3.50.

Every teacher and student of nutrition will welcome the new edition of this fundamental text in the nutrition field. In the author's own words, the book is written, "for those who wish to live more intelligently." Its simple, practical approach to human nutrition problems makes it interesting and useful to beginners as well as others better grounded in the subject.

**ILLINOIS HEALTH MESSENGER**—March 1, 1938. Published by the Illinois Department of Health, Springfield.

In this issue are two papers of particular interest to nutritionists: *NUTRITION A FACTOR IN CHILD HEALTH PROGRAM* by Marjorie Heseltine; *THE FOOD VALUE OF MILK* by Julia Outhouse.

## A PRACTICAL PLAN

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Following is an abbreviated form of two items from the lunchroom score card. Other factors scored are Sanitary Conditions, Attractiveness of Room, Service and Courtesy, Good Manners. A perfect score is 2000 and last year 12 out of 20 schools attained it.

| FOODS | Perfect Score | School Score |
|---|---|---|
| Milk | 100 | |
| If pasteurized, certified or grade "A" raw milk (extra points) | 75 | |
| Hot dish (certain specifications) | 100 | |
| Meat ( " " ) | 50 | |
| Raw fruit or salad | 75 | |
| Sandwiches (nutritious fillings) | 50 | |
| Simple, wholesome dessert | 40 | |
| Whole grain bread | 25 | |
| No candy | 50 | |
| No chili, wieners, etc. | 50 | |
| Three weeks menus—fall, winter, spring | 150 | |
| **HEALTH PRACTICES IN LUNCHROOM** | | |
| Hands washed | 35 | |
| Time allowed for eating (at least 20 min.) | 40 | |
| Children seated at table or desk while eating until finished | 25 | |
| Supervision of food selection | 50 | |
| At least 50% of children drinking milk | 65 | |

**NEW SERIES ON VITAMINS**—Journal of the American Medical Association, 535 N. Dearborn St., Chicago.

The Council on Pharmacy and Chemistry of the American Medical Association have jointly sponsored the preparation of a new series of articles on this subject. The first appeared in the **Journal** of February 19, 1938, and there will be more than thirty articles in all.

**THE SCHOOL LUNCH**—prepared by the Division of Child Hygiene and Public Health Nursing, Illinois Department of Public Health, Springfield. Pp. 20. Free.

This little booklet contains valuable suggestions for making the school lunch an educational project. The rural school lunch is discussed, and menus are given for both served and carried lunches.

### Good Teaching Important if Children are to Benefit from Knowledge of Nutrition

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ment as regards food, milk has the advantage of needing no cooking or other preparation, as well as of being a good money investment. Children should be led gradually, through carefully directed experiences, to see that the rule, a glass of milk for every meal, is not to be broken without danger of lessened fitness.

By the fifth or sixth grade, the boys and girls should know not only the value of milk, but what cereals are, which contribute most to growth, and which each can get for himself when occasion arises. They should also have learned that many vegetables are worth eating and can be palatable if one knows how to make them so. They are then ready to begin to learn, one at a time, the essentials of an adequate diet. They find vitamin A, for instance, to be a real substance; learn where it is stored in the plants which produce it; how it is transferred by the cow that eats it to her milk, and not to her muscles; and how it affects health and growth. Thus they are enabled to select with intelligence born of interesting experience, "vitamin A breakfasts" (or lunches or dinners) which shall fit their tastes and pocketbooks as well as their nutritional needs. "Diet" becomes an adventure in wise selection, and not a restriction.